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The Use of Dynamic Assessment by Educational Psychologists in the UK

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SUMMARY *Training in Dynamic Assessment (DA) was rarely available in the UK until 1994. This is the first study to explore the outcomes of its availability in terms of the practice of DA and perceptions about it among educational psychologists (EPs). One hundred and nineteen EPs, who had taken positive steps to inform themselves about DA by undertaking some degree of training or by joining a DA interest group, were surveyed to explore the extent of their initial training in DA, subsequent use of it and issues of implementation. Overall, the 88 responses (74%) received suggest, among those surveyed, widespread awareness of DA as a model of cognitive assessment and positive attitudes to it, coupled with a low level of implementation. The low level of use was frequently attributed to insufficient training in DA, to lack of time due to other assessment priorities, often set by the local education authority, and to lack of the ongoing expert support felt to be necessary to maintain use of a demanding form of assessment. The authors take the position that the EP's repertoire would be enriched by improved knowledge of and training in DA. The research raises important issues for cognitive assessment and raises the broader question whether there is a need for the more proactive involvement of educators in enhancing the cognitive functioning of children.*

Interest in Dynamic Assessment (DA) as a means of cognitive assessment of children has grown considerably in the UK in recent years (Stringer *et al.*, 1997). DA is based on an approach to the development of cognition in children, and to the role of adults in that development, which differs in a number of important ways from psychometric approaches to assessment.

Psychometric and Dynamic Models of Assessment

Psychometric assessment seeks to measure the intelligence of individuals by means of their performance on a set of tasks at a given point in time and to predict future performance from such measurement. Its basis and purpose is the quantification of differences between individuals of similar ages. In order to secure this objective, it

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is important that the assessor intervenes as little as possible during the performance of the tasks. Socio-cultural variables that may affect this performance — for example, the way in which a parent's or teacher's contribution to a child's cognitive development may have influenced it — are not considered to be of fundamental importance. Similarly the quality and quantity of past learning experiences is not the focus of interest.

In DA, the goal of assessment is very different. By contrast with the psychometric approach, the child's current level of performance is not the focus of interest. The assessor's objective is to understand how children improve their performance *in the course* of given cognitive tasks. In order to achieve this detailed understanding, the assessor must interact with the child during the performance of the tasks.

Theoretical Basis of DA

The theoretical roots of DA lie in Vygotsky's socio-cultural theory of child development (Vygotsky, 1986), in which the child's interactions with parents, carers, teachers, siblings, or peers are fundamental to the formation and growth of cognitive skills, which are *culturally mediated* through these interactions. Cultural mediation is essential in the development of intelligence. *Cultural tools*, the physical, communicative and representational means by which a given society is characterised, are mediated to the child, and their appropriation by him/her, reflected in their cognitive functioning, is the outcome of such mediation. In a related strand of Vygotskian theory, the concept of the Zone of Proximal Development (ZPD) (Vygotsky, 1986) provides a framework from which diverse routes in research and application have developed. The ZPD is defined as the extent to which a child can perform with assistance what they cannot perform alone. The key characteristic of DA derived from this concept of assisted performance is the interaction that occurs within an assessment, which is justified from a socio-cultural conception of intelligence where the possibility of change is a defining feature. Thus intelligence is seen as a dynamic rather than fixed characteristic. Adults and children are viewed as open systems capable of more effective and efficient learning throughout life, and this process is seen as inseparable from the development of intelligence. Children learn and are taught cognitive skills not only through their direct encounters with stimuli in their environment but also through adult mediation. Assessments based on adult mediation represent intensive, time-limited interactions where the assessor is not looking for the average performance of a child, but is searching for samples of *maximal* performance as an indication of his/her ZPD and is also seeking means to help him/her to move through it.

Seen in its theoretical context, DA is a broad approach, not a set of specific tests. The psychologist's goal is one of identifying what cognitive skills need developing and strengthening in a child (and this can be conveyed, for example, in the format of an Individual Education Plan), the cognitive requirements of given types of task (which can inform differentiation of the curriculum for the child), and advising upon and supporting the teaching of the child. This will be direct teaching of cognitive skills, as well as of traditional curriculum content. This micro-analysis focuses on the

three 'partners in the learning process': the child, the task, and the mediator (typically parents or teachers). DA aims to help optimise, through understanding the interplay of these essential elements, the match between the learner and the curriculum on offer.

DA models

The nature of the assessment procedure varies between different DA models. A typical DA procedure may involve three phases, a pre-test, teaching, and post-test, in which interactions take place in the teaching or learning phase. Some DA models use a series of graduated prompts (Carlson & Wiedl, 1980; Campione *et al.*, 1984), where the assessor first intervenes at a minimal level and then with increasing teaching support, if required, in order to achieve success on the tasks of the test. Here, the stages and content of the intervention are pre-determined and still retain some characteristics of standardisation, allowing for responses of different children to be compared. Examples of recent European DA models using this approach are those of Guthke and Wingerfeld (1992), Guthke (1995) and Paour (1992b).

A different model within the DA approach is that of the Mediated Learning group, which is exemplified in the DA models of Feuerstein (1979), Haywood (1992), Lidz (1991) Tzuril (1997b) and Kahn (1992). In these models, intervention during the assessment is not standardised at all and is totally responsive to the individual needs of the child. The use of three phases (test/teach/test) may also be at the discretion of the assessor. The Mediated Learning models are sometimes described as 'clinical' DA interventions, because they are highly responsive to individual needs and lead to diagnostic and prescriptive insights that are uniquely relevant to a particular child. The assessor mediates cognitive strategies to children (Haywood, 1992) rather than teaching better task performance on a specific test item. In such models, key components affecting children's learning needs are identified by means of detailed analysis of the assessor's intervention (Lidz, 1991). The analysis is of: (i) within-child cognitive factors, such as the child's use of 'intellective' skills (e.g. their ability to make comparisons, to conserve, and to generate and test hypotheses), as well as non-'intellective' aspects such as habits, attitudes and degree of motivation; (ii) the component cognitive demands of each assessment task; and (iii) the content of the assessor's mediation. The modality in which the task is presented (e.g. verbal, visual, numerical, pictorial), the level of complexity, the task content, and the specific cognitive skills required for successful performance are the assessor's analytical tools that are deliberately manipulated in response to the behaviour of the child in the test situation. All the child's responses are noted, and the insights gained can result in useful recommendations for teachers and parents.

DA in the UK

Although dissatisfaction with psychometric methods of assessment was expressed as early as the 1920s (Buckingham, 1921), serious development of DA did not take

place until the 1970s. The exception to this general picture was the work of Feuerstein (1979), who began to develop the Learning Potential (or Propensity) Assessment Device (LPAD) in the early 1950s in response to the need to assess, and place within the education system, refugee children whose learning experiences had been limited or disrupted by wartime trauma and cultural dislocation. His work remained an isolated example of a non-psychometric approach to assessment until the DA studies of the 1970s and 1980s (Budoff & Corman, 1976; Carlson & Wiedl, 1980; Campione *et al.*, 1984).

The Mediated Learning DA model (an example of which is Feuerstein's LPAD; Feuerstein *et al.*, 1979; Feuerstein *et al.*, 1986) may be said to be the only fully *dynamic* model of assessment (Haywood, 1992), in that it does not measure task outcomes but rather attempts to teach cognitive strategies for problem-solving — strategies that are conceived as domain independent (Missiuna & Samuels, 1988).

Distinguishing between different DA models is relevant to educational psychologists' (EP) practice because the most widely known in the UK are those of Mediated Learning, which have in general been developed from the specific theories of Feuerstein; for example, those of Tzuriel, Lidz, and Haywood. The analysis of cognitive functions through the LPAD (mediational intervention) is the only DA analytical tool that has been made available to EPs to date in the UK — and that to a very limited extent — in initial or in in-service training. Case history studies such as those of Stringer *et al.* (1997) and Birnbaum and Deutsch (1996) use the LPAD approach as a means of analysing the cognitive functions of the child. Indeed, the interest in DA shown by coverage in this journal and that of the Division of Educational and Child Psychology of the British Psychological Society (BPS) (Birnbaum & Deutsch, 1996) has been largely engendered by DA training provided in the UK for EPs and, with the exception of brief courses given by Feuerstein and his colleagues in the 1980s, these have all taken place since 1994.

Wider Implications

It will be evident from the comprehensive reach of the socio-cultural perspective, which is the theoretical basis of DA, that the assessment process is part of a very much wider terrain. That terrain involves considering what the purposes of education are considered to be, how education is organised in support of those purposes, and how the system views and provides for the cognitive development of children. The perspective as a whole poses a challenge to some current views of education, such as emphasis on curriculum content without an equivalent emphasis on the processes of learning or on the acquisition of metacognitive skills. Moreover, other current educational goals, such as the achievement of inclusive education, pose a similar challenge. Changes to the assessment 'end' of the system should be seen as part of this context of challenge and undoubtedly will have far-reaching implications.

Aim of the Study

This study followed up the experiences of EPs who had had some form of training in DA between 1994 and 1999. Its purpose was to investigate how effective the EPs perceived the training to be, to what extent they subsequently used DA in their professional practice, and what they saw as the advantages and problems of DA in the UK educational psychology context.

Method

The Sample

A questionnaire designed to assess knowledge of, practice of, and views about DA was sent by mail to 119 EPs working in Britain today. The sample of EPs was not random, but was composed of those who, in one way or another, had already expressed an interest in DA. It was felt that the sample would be sufficiently large to enable some generalisation about issues concerning DA among those EPs who had taken positive steps to seek information about it. The sample was composed from mailing lists containing the names of EPs who had attended DA courses in various parts of the country and those of members of the DA national interest group. In addition, a general letter was sent to *The Psychologist*, the journal of the BPS, and to the Association of Educational Psychologists (AEP) requesting interested psychologists to contact the researcher. (There were only three responses to the BPS and AEP approaches.)

Piloting of the Questionnaire

The questionnaire was piloted to ensure that it was brief and consistent with accessing the desired information, that it did not embody prior assumptions about the nature of training or practice in DA, that it did not assume acquaintance with any specific DA method, and that it covered those issues in DA which EPs with knowledge of the technique felt to be the most important. Piloting was by discussion of an initial version with a group of five EPs who all used DA, by postal invitation to five additional EPs who were also asked to comment on the initial version, and by means of an in-depth, semi-structured interview with one EP who regularly practiced DA. The questionnaire was amended to take account of the views obtained.

The Questionnaire

Questionnaire on Dynamic Assessment (DA)

This questionnaire is designed to find out from Educational Psychologists about their knowledge/experience with DA. All responses will be treated as confidential and anonymous. Your name will not be used. Please do fill in your name at the top of the questionnaire, simply for me to know who has responded.

Name:

Please answer the questions and feel free to add any further comments on DA at the end of the questionnaire,

Please tick box

1. (a) Are you:
- (1) An EP working for a Local Education Authority ☐
 - (2) An EP working privately ☐
 - (3) An EP working elsewhere e.g. a voluntary organisation ☐
 - (4) Other ☐
- (b) How many years have you been working as an EP?
- (1) 0–2 ☐
 - (2) 3–5 ☐
 - (3) 6–10 ☐
 - (4) 11–15 ☐
 - (5) 16–20 ☐
 - (6) 20+ ☐
 - (7) Not applicable ☐
2. (a) How did you come to hear about DA?
- (1) Read about it ☐
 - (2) From a friend/colleague ☐
 - (3) In EP core training ☐
 - (4) From a general INSET ☐
 - (5) From a special INSET on DA ☐
 - (6) Other ☐
- (b) Approximately how long have you been practicing DA?
- (1) less than 1 year ☐
 - (2) 1–3 years ☐
 - (3) 4–6 years ☐
 - (4) 7+ ☐
 - (5) Not applicable ☐
3. (a) Are you presently using DA in your job as an EP? Yes ☐
No ☐
N/A ☐
- If yes, please specify:
- (1) less than 2 hours ☐
 - (2) 2–5 hours per week ☐
 - (3) 2–5 hours per month ☐
 - (4) 6–10 hours per month ☐
 - (5) more than 10 hours per month ☐
4. (a) Which theoretical basis do you use in your DA work?
- (1) Feuerstein (MLE) ☐
 - (2) Brown and Campione (graduated prompts) ☐
 - (3) Other (perhaps your own)—please state ☐
 - (4) None ☐
- (b) Which DA materials do you use?
- (1) The LPAD (Feuerstein) ☐
 - (2) D. Tzurriel's materials (e.g. the CATM) ☐
 - (3) Carol Lidz's approach ☐
 - (4) A combination of approaches ☐
 - (5) Other (perhaps your own)—please state ☐
5. (a) Have you received training/INSET in DA? Yes ☐
No ☐
- If Yes, can you give brief details?

- (b) Did you find this training useful to your work? Yes ☐
No ☐
- (c) Was the training adequate in meeting your professional goals? Yes ☐
No ☐
Please explain Partly ☐

6. (a) Do you receive any ongoing support in using DA? Yes ☐
No ☐
- If Yes, is the support:
- (1) From a supervisor ☐
(2) From a DA support group ☐
(3) From a peer support group in your place of work ☐
(4) Other ☐

- (b) In general, do you think support is needed to maintain practice in DA? Yes ☐
No ☐

7. In general, are you satisfied with your present use of DA? Yes ☐
No ☐
N/A ☐

If No, are there any circumstances preventing you from using DA as much as you would like?

8. (a) What do you see as the major advantages of DA?
Can you list 2 or 3?

- (b) What do you see as the major disadvantages of DA?
Can you list 2 or 3?

Any additional comments you would like to make?

Thank you for taking the time to fill out this questionnaire.

Results

Of the 119 questionnaires distributed, 88 were returned giving a response rate of 74%.

Employment

Eighty-five percent of respondents were employed by a local education authority (LEA). The remaining 15% were self-employed, not currently practicing as an EP,

TABLE I. Years of experience of EPs (*n* = 88)

EPs in practice for less than 2 years	16%
EPs in practice from 3 to 5 years	25%
EPs in practice from 6 to 10 years	19.5%
EPs in practice for 11 years and more	37.5%

worked for non-statutory agencies, or held academic positions. Somewhat surprisingly, therefore, given that DA is not considered a mainstream form of assessment, the great majority of EPs in this sample worked for a local authority.

Table I shows that, despite the fact that training in DA has only recently become more widely available in the UK, the majority of those who have expressed an interest or who have taken up training opportunities are not those who are newest to the profession, but rather those with more experience as EPs.

Table II shows that more than one-half the EPs in the sample, despite having been chosen as a result of active interest in DA, have only heard or read about DA. Less than one-half of the respondents have had direct access to any form of training in it. More particularly, although the BPS encourages introduction to a broad range of assessment techniques in the core training of EPs, less than one-quarter of the sample had been introduced to DA within their initial professional training. In the case of the longest-serving EPs, this may have been because information about DA was not available in core training at the time of initial training. Almost without exception, however, respondents indicated a present need for greater DA training provision.

Table III shows that fifty-nine percent of the respondents had used DA (which included, therefore, some who had not been formally trained). The rest, although interested in the technique, had not used it at all. This is no doubt a reflection of the fact that more than one-half of the EPs in the sample (Table II), while having read or heard about DA, had received no DA training.

Over one-half of the users had been implementing DA for 3 years or less. Thus, a large majority of DA users in the UK are new to the field. A supplementary question confirmed that 53% of respondents *currently* use DA, indicating that a small proportion, 6%, have ceased using this form of assessment.

TABLE II. Sources of information about DA (*n* = 88)

Read about it	32%
Heard about it from a friend/colleague	21.8%
EP core training	24%
General INSET	4.5%
Specific INSET on DA	13.64%
Some other source	4.5%

TABLE III. Length of time the EPs had been using DA ($n = 88$)

Less than 1 year	25%
Between 1 and 3 years	27.5%
Between 4 and 6 years	6.89%
Non-users	39%

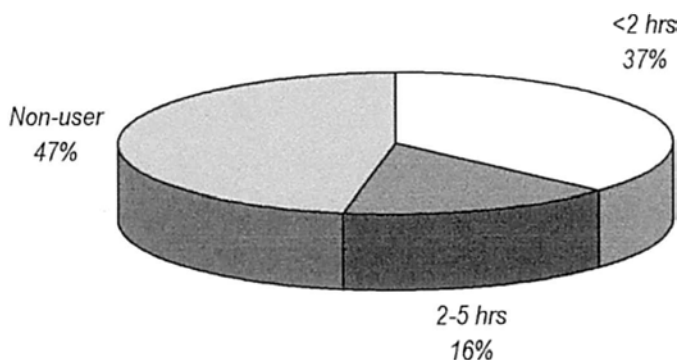


FIG. 1. Time spent per week on Dynamic Assessment.

Figure 1 shows the extremely low level of use of DA among interested EPs. This may be due in part to lack of time overall for assessment of pupils, and to the fact that DA is a time-consuming form of assessment. Two recent studies of EPs use of time, that of Thomson (1998) in Scotland and of Imich (1999) in the UK consider, respectively, the time allocated specifically to casework and more generally to schools. Neither identifies assessment as a separate category. However, Imich reports 39% of EP time spent in schools, and Thomson notes that EPs report doing less casework than they had done previously. If time spent in schools and casework are considered to include time spent on assessments, then a relatively small proportion of an EP's time is likely to be available for assessment. Responses to our questionnaire indicate that EPs are not happy with this situation.

Theoretical Bases and Materials Used

Of the EPs in the sample who acknowledged a theoretical basis for their DA work or for their knowledge of DA (60% in all), the majority identified Feuerstein's theories (Feuerstein & Feuerstein, 1991), including the theory of Mediated Learning Experience (41%). The remainder identified Campione and Brown's (Campione *et al.*, 1984) Vygotskian-based approach (9%) or selected the category: 'Other, (perhaps your own)' (10%). By contrast, of the 62% of respondents who answered the question 'Which DA materials do you use?', the majority (45%) said that they used a combination of materials. Few used Feuerstein's (1986) LPAD (3.4%), and equally small proportions (7% in each case) used Tzuriel's materials (Tzuriel, 1997b) or the materials of Lidz (1991), both of whom have taught brief workshops in the UK within the past 3 years. Ten percent used other materials. One possible explanation for this pattern is the fact that no one set of materials available to DA

TABLE IV. 'Was your DA training adequate to meet your professional goals?' (*n* = 62)

Yes	21.8%
No	13.8%
Partly	34.5%

users can be considered suitable for the entire age range. There is some indication that a few of those choosing the category 'Other' have attempted to use psychometric tests such as the British Ability Scales dynamically, although this is not recommended by leading practitioners (Lidz, 1991; Haywood & Tzuriel, 1992).

DA Training Received

Seventy-one percent of the respondents to this item indicated that they had received some kind of DA training. Of these, roughly equal proportions had attended an introductory session less than 1 day in length (22%), a 3-day workshop (or up to three individual days) (22%) or had undertaken training courses of 5 days or more (26%).

Usefulness of DA Training to EPs and Issues of Continuing Support

Ninety-four percent of those who responded to this item (about one-third did not respond) answered 'yes' to the question about whether they had found the training they had received useful in their work, indicating that they had found something of value in what they had seen or heard. However, of those who answered the supplementary question 'Was the training adequate to meet your professional goals?', the majority responded either 'Partly' or 'No'. Table IV shows the proportions. Most of those who responded to the supplementary question wrote comments that clarified their response, many of them expanding on why they had responded 'partly'. The clarifications they offered are classified in Table V.

Overall, approximately one-half of the respondents commented on the training they had received and, of these, over three-quarters indicated that their needs were at best only partly met.

- No-one who had less than 3 days training in DA considered the training to be adequate

TABLE V. Reasons why DA training mostly did not meet EPs' requirements

Insufficient basic training	39%
Lack of follow-up support and supervised practice	24%
Difficulty in integration into practice	10%
Training experience positive	14%
Other	13%

- Of those who had taken a 3-day course (20 respondents), only three users were able to practice at what they regarded as a satisfactory level
- Of the 18 respondents who had undertaken the longest UK training (5–15 days), by contrast, 17 stated that they were able to practice with confidence and several had gone on to share their skills with other EPs.

Beyond the issue of initial training, there was near unanimity (99%) that follow-up support and practice was necessary in addition to training.

Reasons Why Continuing Support is Felt to be Needed

The comments of EPs indicated four reasons why support was needed after initial training:

- Early on, support for first attempts to implement the new skill is required. At a later stage, advice is needed on how DA materials are best used as well as guidance on the new ways of observing children's functioning that DA requires and on interpreting what is seen. It is also seen as very important that EPs are helped to develop report-writing formats which, in the context of DA, reflect the individual needs of a child, make practical recommendations, communicate clearly to parents and to other professionals, and are not too time consuming
- DA is very different in character and implementation from the score-yielding standardised testing that many schools associate with EPs' assessments of children. The rationale and advantages of DA need to be explained in ways that will lead to its acceptance, and EPs consider that support is needed to do this
- The outcome of a DA is likely to result in recommendations for classroom practice that do not slot neatly into the headings of National Curriculum subjects. EPs must devise ways of helping teachers to implement these recommendations, and indicated that they need advice and support in doing this
- An EP may be the only one in the service who is using DA. In the absence of a peer group of DA users and expert support, an EP may become discouraged and use of DA becomes difficult to maintain

These and other comments conveyed a real feeling of regret among the EPs surveyed that the difficulties they encountered prevented them from being able to use DA as much as they wished.

Support Actually Received

Only 22 EPs reported receiving any kind of expert support following initial training in DA. Of these, seven said they belonged to a DA support group, 12 reported getting some support from a peer group in their place of work, and three reported other forms of support such as team meetings. No-one referred to regular support. A few mentioned unsuccessful efforts to provide a support forum. A major difficulty is that very few people are available in the UK with sufficient experience of DA to

TABLE VI. Reasons for EPs' dissatisfaction with the extent of their current use of DA

1. Constraints of roles and responsibilities	5.7%
2. Local authority attitudes	17%
3. Time	21.5%
4. Training	25%
5. Supervision and support	22.7%
6. Resources and materials	9%
7. No problems	5.7%

act as advisors or facilitators of support groups, and many local authorities at the present time have no such person they can call on.

Reasons for EPs' Dissatisfaction with the Extent of their Current Use of DA

Only 12.5% of respondents were satisfied with the current extent of their use of DA. The categories of classification for reasons for dissatisfaction and for the advantages and disadvantages of DA were established after independent allocation by three classifiers. The reasons given for dissatisfaction fell into seven broad categories. The proportions of respondents in each are set out in Table VI.

Constraints of roles and responsibilities. These included management responsibilities within an EP team, course tutorships or academic posts.

Local authority attitudes. There was pressure from LEAs to perform standardised psychometric tests for statutory assessments and, in general, a demand for test scores as measures of academic potential. EPs were seen as number providers and by schools as 'resource getters', and not as having a role in intervention. A comment that summed up the spirit of many was 'Psychometrics is seen as secure ... expectations need to be changed and this includes schools as well who regard EPs as score suppliers, but not as contributing anything to intervention in getting children to learn more effectively'.

Time constraints. This was a very frequently stated reason for failure to practice DA to the extent desired. Constraints were due to large caseloads, insufficient time allocated to schools to work with individual children and the extra time required for DA when compared with other forms of assessment.

Training needs. Difficulty in accessing initial training was the most frequently stated reason for restricted use of DA, sometimes due to budget restrictions, and lack of confidence to practice following insufficient initial training. EPs felt that DA training needed to be a Continuing Professional Development priority.

TABLE VII. Advantages of DA ($n = 88$)

Flexibility	9%
Positive for child and EP	46.6%
Interactive	14.8%
Practical—advice for teachers	51%
Alternative to psychometrics	21.6%
Rich in information	20.5%
More culture—fair	4.5%

Lack of supervision and ongoing support. Lack of supervision and support was also very frequently stated as a reason for failure to begin or to maintain practice of DA.

Resources and materials. Comments in this category were about difficulty in accessing materials and difficulty in working with them. These issues can be seen as interrelated with those concerning time and budget constraints, and with training inadequacies.

No constraints on practice. Of the five EPs who did not report any constraints on their practice, one was a neuro-psychologist, two were in private practice (and hence free of constraints associated with LEA budgets and policies), and three had taken a leadership role in promoting the training and practice of DA and so must have challenged and overcome difficulties encountered by many of their colleagues. These three had all undertaken the fullest available training, had sought to pass on the skills they had acquired to teachers or to other EPs, had offered peer support and had joined a national DA network or forum.

Perceived Advantages of DA

The fact that more EPs (71) responded to this item than had used DA reflects the interest in its principles that was aroused by hearing or reading about it. Very varied responses were grouped into seven categories. The proportions of responses in each category are set out in Table VII.

Flexibility. A number of respondents commented on the flexibility of the DA process. This included the freedom to select materials, to adjust tests, to vary interventions, styles of intervention and the responses of the assessor according to the needs of the child.

Positive for the child and the EP. Many EPs saw DA as enhancing the self-esteem of the child by enabling him/her to see himself/herself as a person who could rather than could not learn, as looking for strengths rather than weaknesses and for maximal rather than average performance. (Some referred explicitly to the zone of proximal development.) DA was perceived as 'a student-friendly approach'. It was

TABLE VIII. Disadvantages of DA (*n* = 88)

Time	30.7%
Language of DA	14.8%
Linking DA to the curriculum and classroom practice curriculum and classroom practice	24%
Non standardised—subjective	19.3%
Insufficient research	12.5%
DA materials	11.3%
LEA demands	20.5%
No major disadvantage	5.7%

seen as showing ‘positive directions for future development rather than a deficit model’ and as being ‘a more challenging way for an EP to work with a child’.

Interactive. Some EPs specifically used this word to describe an advantage of DA and, indeed, it fundamentally distinguishes the process of DA from that of standardised testing.

Provides practical advice for teachers. The largest group of responses fell into this category. DA was seen as indicating to parents and teachers concrete ‘next steps’ in learning for a child, generating ideas to help, and providing strategies. ‘Offers down to earth and usable advice for teachers and Special Needs Assistants as a direct result of assessment’ was a typical comment.

Alternative to psychometrics. The existence of an alternative to a psychometric approach was seen as an advantage. DA was also described as ‘more realistic’ or simply ‘superior’.

Rich in information. Included in this category were comments on specific aspects of DA that give information not easily obtained in other ways. These included the Cognitive Map (used for task analysis), the use of mediational strategies (seen as able to give information about a child’s learning needs and the type of intervention required on the part of the assessor and, later, by the teacher), and the analysis of cognitive functions that can help identify ‘barriers to learning’.

More culture-fair. A few comments described DA as less culturally biased and as non-discriminatory.

Perceived Disadvantages

Again, the number (70) of responses indicated that some were from EPs who did not practice DA. There was a wide variety of responses. Table VIII sets out the numbers of responses in each class.

Time. The amount of time needed for assessment, report writing and feedback was the most frequently noted disadvantage of DA.

Language. The vocabulary and concepts used in DA were considered to make communication with parents and teachers difficult.

Links to classroom practice. DA was seen as difficult to link to classroom practice. It is interesting to recall that the possibility of such linkage was seen by other EPs as one of its advantages.

Subjective. DA was seen as being too open to individual interpretation. Thus, the flexibility seen as an advantage by some EPs was seen by others as a weakness.

Insufficient evaluation. Some EPs felt there was insufficient research on long-term outcomes of DA intervention or comparing DA with standardised tests in terms of usefulness.

DA materials. DA materials were criticised as being either inaccessible or too expensive.

LEA demands. LEA preference for standardised test scores was seen as a disadvantage of DA. Again, what was seen by some EPs as an advantage (DA's individualised, diagnostic approach) was seen by others as a drawback in the light of LEA constraints.

No major disadvantages. Five EPs saw no major disadvantages, provided attention was given to adequate practice, involving teachers and providing support for EPs.

Discussion

Of a membership of approximately 2000 EPs reported by the Association of Educational Psychologists in 1999, the 119 to whom this questionnaire was sent probably represent a majority of those who have taken positive steps to inform themselves about DA, either by joining an interest group or through some kind of training. Of these, only 58% identified themselves as DA users. Indications are, therefore, that current use of DA by most EPs in the UK is very limited.

Many EPs in our sample were attracted by DA's commitment, in contrast with psychometric models, to the assessment of learning potential, a positive interaction between EP and child, and to what they saw as its more culture-fair approach in a multi-cultural environment. They also considered that it offered increased opportunities to demonstrate psychological and analytical skills and to link assessment to intervention. Nevertheless, 41% of EPs who had all shown an interest in DA had not used it at all in their work. The study suggests that it was lack of training opportunities and expert support that produced this outcome, indicating a substantial unmet need. Hardly any respondents complained about the quality of the

training received, but they felt that it was insufficient. Although some EPs who followed only a 3-day course did report practicing DA, the same EPs also reported a lack of confidence to interpret and use DA materials, write reports or give advice about classroom intervention on the basis of a DA assessment. Indeed, nearly two-thirds of those who responded 'partly' to the question about whether the training they received was adequate for their professional needs — including many who received more than 3 days of training — felt there was a need for longer training and more follow-up support, including supervised practice, which would enable them to put DA concepts into operation. A particular issue raised by some of the most active DA users was the difficulty of adapting DA concepts, as presented in training, to the UK educational context. This reported difficulty could be the result of insufficient understanding on the part of practitioners or could be indicative of a more fundamental problem, i.e. whether the cognitive functions analysed in a DA approach and the mediational strategies used by the assessor are in some way untranslatable into curriculum content. The present limited level of DA training and experience does not yet enable us to address these important questions and impedes the wider understanding of DA that would inform discussion of them. Such discussion is essential because DA is based on a different paradigm from that on which psychometric tests are based. It poses a challenge to traditional psychometric assessment models and to the expectations of many school psychological services.

Availability of Suitable Training

Why has adequate UK training in DA been in such short supply? According to this study, the best-known approach to DA among British psychologists is that of Feuerstein who has not encouraged training in his Learning Potential Assessment Device or access to its materials outside Israel. Courses that have been available in the UK have largely been the result of invitations to other prominent figures in the Mediated Learning approach to DA, such as Carol Lidz and David Tzuriel who have introduced their own materials to British EPs. Such courses have not, however, in the opinion of the present authors, offered a sufficiently thorough foundation training to enable EPs to use the analytical concepts and the materials effectively. What is required is training in the theoretical basis of DA and in the skills of analysis it requires, followed by an introduction to a range of tests through which the analytical tools (the key tools of DA) can be applied. Opportunities to practice DA under supervision should be a component of practitioner training. This extended type of training was undertaken by those EPs in the study who were the most confident and experienced in the use of DA. If Feuerstein's theoretical approach is the one most widely associated with DA by British EPs, then training in it should be more widely available within the UK. Experts visiting from overseas may act as catalysts, but long-term growth is only likely to result from the work of skilled local trainers who are thoroughly familiar with the UK educational context. In this situation, better initial training would be likely to lead to more confident practice, resulting in a group of experienced professionals able to support newly trained EPs.

Giving feedback on assessments to teachers and parents and involving them in intervention would also become easier.

LEA and School Attitudes

Many EPs saw 'LEA demands for scores' (as one response succinctly put it) as a barrier both to wider acceptance of the theoretical approach of DA and to the allocation of the time necessary to undertake this type of assessment. Schools, according to some respondents, also do not see the EP's role as that of offering expert advice on meeting the teaching and learning needs of students, but rather as that of the LEA representative who is called in to make student assessments on the basis of which the school can get the resources it needs. The effects of the latter perception is regretted by many of the EPs who participated in this survey. The enormous pressures on LEA officers, school managers and teachers should be borne in mind here, however, and the perceptions of these survey participants do not in themselves indicate that these education staff would, in principle, be unwilling to consider the perspectives offered by DA. In general, EPs have been able to develop their professional practice through innovation even in the context of considerable difficulties, and they have often managed to negotiate their roles and tasks to the benefit of such development. Building on this experience, EPs have a potentially pivotal role to play. In advising school policy-makers, on the one hand, and devising with teachers concrete classroom strategies on the other, they are at an interface that offers the possibility of real influence on how children's cognitive development is understood and how this is reflected in teaching programmes. The government's recent concern (Department for Education and Employment, 1999) with the teaching of thinking skills may facilitate EPs in this role by providing the education community with an opportunity to reappraise the purposes of cognitive assessment. The authors do not suggest, moreover, that the perception of LEA demands of many respondents in this survey reflects any universal picture of LEA attitudes. Responses from this small sample of UK EPs indicated perceptions about LEA demands in general, and did not comment on the respondent's own LEA. It may well be that, in some LEAs, EPs have more active roles, through consultation models, at different stages of the Special Educational Needs Code of Practice than was suggested by the responses we received, and that such roles might provide scope for considering DA as an alternative assessment model. From the survey, however, it was not possible to identify factors associated with the use of DA or lack of uptake in specific contexts.

Difficulty of Communicating Findings of a DA

A number of respondents indicated that they found that the outcome of a DA could be difficult to communicate to teachers due to the unfamiliarity of the language and concepts used. This might contrast, for example, with the situation where the outcomes of a curriculum-based assessment are being communicated, when EPs and teachers can take some common ground for granted. In DA, clarity of com-

munication is especially important since assessment and intervention are seen as aspects of a single process. In the DA model, the interactive assessment sets in motion changes that continue in the teaching context. Interventions that indicate a DA will be beneficial to a child must be implemented if there is to be any point to the exercise. In some cases, a challenge may well be posed for the EP in communicating, usually in the format of an Individual Education Plan, the findings of a form of assessment that is unfamiliar to Special Educational Needs (SEN) Co-ordinators, class teachers and parents. This is an area in which the kind of training and support advocated by the authors in their conclusion could be of assistance. Specific use that may be made of a DA in contributing to assessment at Stage 3 of the Code of Practice is exemplified in Birnbaum and Deutsch (1996).

A Return to 'Process-Based Education'?

The real challenge, however, may come on a broader front. As one respondent explained, it may be that DA should not be seen 'as just another form of assessment, but as part of a turn, or return, to process-based education'. DA may be considered just one means among others of bringing expertise to bear on the cognitive needs of individual children. Its principles may indeed find a wider application, to whole groups of students, through the use of mediational teaching as a tool for developing cognitive skills and fostering metacognitive awareness as specific educational objectives. Teachers are manifestly concerned about the process of children's learning, in addition to the content of learning. Under the title of 'thinking skills', this concern now also finds government recognition (Department for Education and Employment, 1999).

Inflated claims for DA must be avoided, however. In itself, it is not 'a total framework for meeting children's needs' (in the words of one respondent). There is no evidence that would justify replacing all other forms of assessment with DA. Haywood (1992), Lidz (1987), Tzuriel (1992) and Samuels (Missiuna & Samuels, 1988), for example, all recommend DA as a complementary form of assessment whose use must be selective. The present authors would argue, however, that DA offers a distinctly different paradigm of assessment that is worth being studied, understood and practiced to enable a critical appraisal of its potential uses and disadvantages to be made. It is significant that a large number of respondents who commented about the perceived advantages or drawbacks of DA were not commenting from the vantage point of experience. They were offering opinions that they themselves acknowledged to be largely based on their theoretical understanding of DA and not on practitioner experience.

Issues for Evaluation

One potential outcome of wider training leading to critical use and evaluation is the possibility of achieving a clearer estimation of the practical benefits of DA. If, as was widely stated in this survey, its theoretical approach is appealing, it does not

necessarily follow that the methods that seek to operationalise the theory are successful. If they are successful at a practical level, then we need to understand with which types of presenting problems they are successful.

The DA model most often taught and practiced in the UK is that of Mediated Learning, the most individualised of the DA models, and an obvious question is whether this approach is suitable for individual case work only. How useful might a method that is largely clinical and individual in style prove to be across whole groups of children?

It has been suggested that DA may be especially useful in assessing bilingual children, as well as those from a variety of cultural and ethnic backgrounds (Usmani, 1999). Indeed, in a number of situations, including disability and disadvantage, in which individual functioning poses challenges to school provision, DA (as many respondents noted) is intuitively appealing as EPs search for approaches that seek to explore learning potential rather than confirm poor current performance. It remains to be tested whether this appeal can be turned into practical and meaningful interventions and advice for parents and educators.

Such evaluations remain to be carried out. The field of DA as a whole still lacks a substantial body of empirical studies. The authors would argue that we are not yet in a position to do more than pose the questions. The answers must wait until EPs in the UK are sufficiently familiar with the theory and practice of DA to undertake the necessary evaluations, and determine whether DA can indeed become one of the EP's range of accessible and practical tools. But adequate training and support would seem to be essential if EPs are to have a real choice of approaches to assessment and, in particular, if DA is to be critically evaluated.

Dilemmas for DA?

We have noted that what were seen as advantages of DA by some EPs could be seen by others as disadvantages. These contrasting views relate to the radically distinct nature of the concepts of assessment used by DA compared with more traditional types of assessment, the necessary continuity of the assessment process with later classroom practice, and the individuality of interpretation that is required by the assessment. It should be borne in mind that many of the responding EPs had not practiced DA, and so their views derived from a theoretical understanding only. It is reasonable to suppose that, if the thorough training and follow-up support for which so many respondents indicated a need were provided, perceived disadvantages would prove for some to be simply the result of a lack of close familiarity with the practice of DA. Doubts and differences of opinion about DA's whole theoretical perspective, and hence of the type of practice that it necessitated, would doubtless remain, however. Doubts can only be resolved one way or another following a thorough evaluation of DA by EPs themselves and this, as the authors argue, is not possible until a larger number are equipped to practice it. Differences of opinion about the purposes of assessment in general reflect deep divisions about the nature of human cognition and can be expected to remain.

Conclusions and Recommendations

The outcome of this research suggests that knowledge of DA deserves to be extended and developed further in the UK than it is at present. The following are offered as possible ways forward:

- A commitment on the part of core EP training programmes and Continuing Professional Development programmes to offering substantial training courses in the theories underlying DA and applications of the model, exploring a variety of ways in which DA can be used, interpreted and reported
- Working towards a national standard of training and accreditation of DA courses and post-training supervision, so that criteria of competence for both trainers and practitioners can be achieved. This does not imply that there is one 'right way' of practicing DA. This could hardly be so, because (as argued in the Introduction) assessment itself, including the range of different DA approaches, is properly seen as just one manifestation of a whole perspective on cognitive development. Nevertheless, training cannot simply consist of an introduction to such a perspective. It needs to be of sufficient depth to ensure that EPs are able to demonstrate in their practice skilled analysis of cognitive processes and skilled mediational intervention. Such criteria of competence should take into account similar criteria in DA training which are applied overseas, whether offered in specialist centres or by universities, so that competence in the use of DA would be recognised wherever it was used. This proposal is consistent with initiatives now in progress towards agreeing standards of training for EPs across different European countries
- A more open and exploratory perspective on the part of some EP services and LEAs towards helping children at risk of failure. This would imply being prepared to consider increased allocation of time and professional support necessary for alternative or complementary assessment approaches such as DA. As several respondents noted, this may contribute usefully to differentiating and diversifying classroom teaching strategies in schools committed to inclusive education.

This study has shown that, while attitudes of British EPs towards DA are not simple — aspects that are seen as advantages by some may be seen as disadvantages by others — there is also a strong interest in learning more about it, in being given time to use it if it is felt to be appropriate, and in being supported in so doing. Only in these circumstances can the value of DA be thoroughly tested.

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